

SCIENCE – Cycle A			
Subject	Key vocab.	Declarative knowledge	Procedural knowledge
Autumn 1 (A) Phase: EYFS	healthy heart breathe exercise move grow born babies children adults life cycle explore sort	<u>All About Me</u> <ul style="list-style-type: none"> I know that exercise is important for my body. [Personal, Social and Emotional Development: Managing Self] I know that I was a baby when I was born. [Understanding the World: The Natural World] I know that babies grow. [Understanding the World: The Natural World] 	<u>All About Me</u> <ul style="list-style-type: none"> I can explore how my body feels when I exercise. [Physical Development: Gross Motor Skills] I can explain how my body has changed since I was born. [Understanding the World: The Natural World] I can sort pictures of a life cycle. [Understanding the World: The Natural World] <u>Investigation:</u> How does my body change when I exercise?
Autumn 2 (A) Phase: EYFS	weather land water ice melts freezes warm heated grow plants animals describe observe explore	<u>The Solar System</u> <ul style="list-style-type: none"> I know that there are different weather conditions where I live. [Understanding the World: The Natural World] I know that there are rocks, water and ice on my Earth. [Understanding the World: The Natural World] I know that ice melts when it gets warm. [Understanding the World: The Natural World] I know that plants grow on my planet. [Understanding the World: The Natural World] I know that animals live on my planet. [Understanding the World: The Natural World] 	<u>The Solar System</u> <ul style="list-style-type: none"> I can describe the weather. [Understanding the World: The Natural World] I can sort solids and liquids. [Understanding the World: The Natural World] I can explore what happens to ice when it is heated. [Understanding the World: The Natural World] I can describe the difference between water (liquid) and ice (solid). [Understanding the World: The Natural World] I can make observations and drawings of animals. [Understanding the World: The Natural World] I can make observations and drawings of plants. [Understanding the World: The Natural World] <u>Investigations:</u> How does heat affect ice? What can I observe in my surroundings? How does the weather change?
Spring 1 (A) Phase: EYFS	plants seeds grow roots stem leaves water soil sunlight materials observe compare investigate	<u>Fairy Tales</u> <ul style="list-style-type: none"> I know that plants grow from seeds. [Understanding the World: The Natural World] I know that plants have roots, leaves and stems. [Understanding the World: The Natural World] I know that plants need water, soil and sunlight to grow healthily. [Understanding the World: The Natural World] I know the names of different materials, including brick, wood and straw. [Understanding the World: The Natural World] 	<u>Fairy Tales</u> <ul style="list-style-type: none"> I can make observations as a plant grows. [Understanding the World: The Natural World] I can name the roots, leaves and stem of a plant. [Understanding the World: The Natural World] I can compare a healthy plant and an unhealthy plant. [Understanding the World: The Natural World] I can investigate the strength of different materials. [Understanding the World: The Natural World] I can describe the properties of different materials. [Understanding the World: The Natural World] <u>Investigation:</u> What do plants need to grow healthily?
Spring 2 (A) Phase: EYFS	spring summer autumn winter temperature rise fall wake sleep hibernate grow seeds bulbs seasons investigate observe explain	<u>Spring Into Action</u> <ul style="list-style-type: none"> I know the names of the four seasons. [Understanding the World: The Natural World] I know that the temperature starts to rise in the spring. [Understanding the World: The Natural World] I know that plants need sunlight to grow. [Understanding the World: The Natural World] I know that plants grow from seeds and bulbs. [Understanding the World: The Natural World] I know that some animals wake from hibernation in the spring. [Understanding the World: The Natural World] 	<u>Spring Into Action</u> <ul style="list-style-type: none"> I can name the four seasons. [Understanding the World: The Natural World] I can investigate how the temperature changes. [Understanding the World: The Natural World] I can observe how my environment changes in spring. [Understanding the World: The Natural World] I can explain why some animals hibernate in the winter and wake in spring. [Understanding the World: The Natural World] <u>Investigation:</u> How does the environment change in spring?

<p>Summer 1 (A) Phase: EYFS</p>	<p>fruit vegetable dairy meat healthy unhealthy teeth clean hygiene</p>	<p><u>Healthy Living</u></p> <ul style="list-style-type: none"> I know that fruits and vegetables grow on plants. [Understanding the World: The Natural World] I know that some foods are good for my health. [Personal, Social and Emotional Development: Managing Self] I know that some foods are bad for my health. [Personal, Social and Emotional Development: Managing Self] I know how to look after my teeth. [Personal, Social and Emotional Development: Managing Self] I know how to keep clean. [Personal, Social and Emotional Development: Managing Self] 	<p><u>Healthy Living</u></p> <ul style="list-style-type: none"> I can sort foods into the groups: foods from plants, foods from animals. [Understanding the World: The Natural World] I can sort foods into the groups: health and unhealthy. [Personal, Social and Emotional Development: Managing Self] I can talk about how food is produced. [Understanding the World: The Natural World] I can tell a friend how to stay healthy. [Personal, Social and Emotional Development: Managing Self] <p><u>Investigation:</u> How can foods be grouped?</p>
<p>Summer 2 (A) Phase: EYFS</p>	<p>fire water burn smoke sink float liquid heat cold hot safety</p>	<p><u>People Who Help Us</u></p> <ul style="list-style-type: none"> I know what fire is. [Understanding the World: The Natural World] I know that some materials burn. [Understanding the World: The Natural World] I know that some substances put out fires. [Understanding the World: The Natural World] I know that water is a liquid. [Understanding the World: The Natural World] I know that some objects float. [Understanding the World: The Natural World] I know that some objects sink. [Understanding the World: The Natural World] 	<p><u>People Who Help Us</u></p> <ul style="list-style-type: none"> I can identify fire in a picture. [Understanding the World: The Natural World] I can talk about fire safety. [Personal, Social and Emotional Development: Managing Self] I can describe the properties of fire. [Understanding the World: The Natural World] I can talk about water safety. [Personal, Social and Emotional Development: Managing Self] I can describe the properties of water. [Understanding the World: The Natural World] I can investigate which objects float and which objects sink. [Understanding the World: The Natural World] <p><u>Investigation:</u> Which materials float and which materials sink?</p>
<p>Autumn 1 (A) Phase: Y1/2</p>	<p>seasons spring summer autumn winter temperature degrees Celsius thermometer weather vane hot warm mild cold</p>	<p><u>Seasons – Autumn and Winter</u></p> <ul style="list-style-type: none"> I know that the length of the day varies throughout the year. I know the types of weather associated with the four seasons. I know that seasonal changes will affect my clothing choices. I know how some animals are affected by the low temperatures in winter. 	<p><u>Seasons – Autumn and Winter</u></p> <ul style="list-style-type: none"> I can plot changes in the weather on a chart. I can describe how the length of the day changes as the seasons change. <p><u>Investigation:</u> How does the weather change?</p>
<p>Autumn 2 (A) Phase: Y1/2</p>	<p>habitat micro-habitat organism</p>	<p><u>Living Things and their Habitats</u></p> <ul style="list-style-type: none"> I know what a habitat and microhabitat is. I know that most living things need shelter and food to survive. I know that different living things are suited to different habitats. 	<p><u>Living Things and their Habitats</u></p> <ul style="list-style-type: none"> I can describe the conditions in different habitats. I can make a graph to record how many minibeasts were observed in their habitat. I can compare what I find in different habitats. <p><u>Investigation:</u> Which habitat do minibeasts like the most?</p>
<p>Spring 1 (A) Phase: Y1/2</p>	<p>materials properties object suitability uses</p>	<p><u>Suitability of Everyday Materials</u></p> <ul style="list-style-type: none"> I know the names of the following materials: wood, plastic, glass, metal and rock. I know the following properties: hard, soft, bendy, rigid, smooth, rough, transparent, opaque and waterproof. 	<p><u>Suitability of Everyday Materials</u></p> <ul style="list-style-type: none"> I can distinguish the difference between an object and the material from which it is made. I can describe the properties of wood, plastic, glass, metal and rock. I can compare the suitability of a variety of everyday materials for particular uses. I can compare and group together a variety of everyday materials on the basis of their properties. <p><u>Investigation:</u> Which material should we use to make a house for the Three Little Pigs?</p>

<p>Spring 2 (A) Phase: Y1/2</p>	<p>seasons spring summer autumn winter temperature degrees Celsius thermometer weather vane hot warm mild cold</p>	<p><u>Seasons: Spring and Summer</u></p> <ul style="list-style-type: none"> I know that the length of the day varies throughout the year. I know the types of weather associated with the four seasons. I know that seasonal changes will affect my clothing choices. I know how some plants are affected by rising temperatures. 	<p><u>Seasons: Spring and Summer</u></p> <ul style="list-style-type: none"> I can plot changes in the weather on a chart. I can observe which animals I see in the spring or summer. <p><u>Investigation:</u> Is the temperature always the same? Does the wind always blow in the same direction?</p>
<p>Summer 1 (A) Phase: Y1/2</p>	<p>baby toddler child teenager adult growth nutrition respiration healthy grow strong energy</p>	<p><u>Animals Including Humans (Healthy Lifestyles)</u></p> <ul style="list-style-type: none"> I know that animals, including humans, have offspring that grow into adults. I know that animals, including humans, need water, food and shelter to survive. I know that humans need to exercise to stay healthy. I know that humans should eat the correct balance of each food group. I know that humans need good hygiene to stay healthy. 	<p><u>Animals Including Human (Healthy Lifestyles)</u></p> <ul style="list-style-type: none"> I can compare my height to the height of an adult. I can observe and record the life cycle of animal such as a frog or a butterfly. <p><u>Investigation:</u> Are all children small and all adults tall?</p>
<p>Summer 2 (A) Phase: Y1/2</p>	<p>roots branch trunk stalk leaf flower petal seeds bulb twigs evergreen deciduous</p>	<p><u>Plants</u></p> <ul style="list-style-type: none"> I know the basic structure of a flowering plant, including a stem, leaves, roots and petals. I know the names of the following plants: daffodils, daisies, buttercups, roses, poppies, tulips and dandelions. I know that there are evergreen and deciduous trees. I know that plants need water, light and warmth to grow healthily. 	<p><u>Plants</u></p> <ul style="list-style-type: none"> I can observe and describe how seeds and bulbs grow into mature plants. I can draw diagrams showing parts of different plants, including trees. I can investigate the conditions needed for growth. <p><u>Investigation:</u> What do plants need to grow healthily?</p>
<p>Autumn 1 (A) Phase: Y3/4</p>	<p>attract repel north pole south pole magnetic field push pull friction</p>	<p><u>Forces and Magnets</u></p> <ul style="list-style-type: none"> I know that magnets can attract and repel. I know that objects move differently on different surfaces. I know that magnets have two poles. I know the difference between a push and a pull. 	<p><u>Forces and Magnets</u></p> <ul style="list-style-type: none"> I can compare and group materials based on whether or not they are attracted to a magnet. I can investigate whether or not magnetic forces can act a distance. I can record my findings in a table. <p><u>Investigation:</u> Are all metals magnetic? Do magnets work at all distances? How do road surfaces affect the speed of cars?</p>
<p>Autumn 2 (A) Phase: Y3/4</p>	<p>sedimentary metamorphic igneous heat pressure erosion transportation deposition melt solidify</p>	<p><u>Rocks</u></p> <ul style="list-style-type: none"> I know the three different types of rocks. I know how fossils are formed. I know how soil is formed. I know how rocks may change in water. 	<p><u>Rocks</u></p> <ul style="list-style-type: none"> I can compare and classify different kinds of rocks based on their appearance and properties. I can observe and explore how rocks change over time, using scientific equipment such as a hand lens. I can compare and classify rocks according to whether they have grains or crystals. I can explore similarities and differences between different soils. I can investigate what happens when rocks are rubbed together. I can record my observations in a Venn diagram or a table. <p><u>Investigation:</u> Are all rocks the same?</p>

<p>Spring 1 (A) Phase: Y3/4</p>	<p>nutrition diet vitamins minerals fats proteins carbohydrates</p>	<p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> I know what animals need to survive. I know why animals and humans have skeletons and muscles. 	<p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> I can compare and classify animals with and without skeletons. I can decide how to classify animals based on their diet. <p><u>Investigation:</u> Can people with longer femurs jump further? Can a skeleton work without muscles?</p>
<p>Spring 2 (A) Phase: Y3/4</p>	<p>opaque translucent transparent block absence of light reflect reflection sunset sunrise</p>	<p><u>Light</u></p> <ul style="list-style-type: none"> I know that light is needed in order to see things. I know that dark is the absence of light. I know that light is reflected from surfaces. I know how and why I need to protect my eyes from the sun. I know how shadows are formed and how they change. 	<p><u>Light</u></p> <ul style="list-style-type: none"> I can make systematic and careful observations to find patterns in the way that the size of shadows change. I can use bar charts to record my findings. <p><u>Investigation:</u> When will I see the longest shadow?</p>
<p>Summer 1 (A) Phase: Y3/4</p>	<p>roots branch trunk stalk leaf flower petal seeds bulbs, twigs petal stamen carpel pollination fertilisation germination</p>	<p><u>Plants</u></p> <ul style="list-style-type: none"> I know the functions of each part of a flowering plants (roots, stem/trunk, leaves and flowers). I know what plants need to grow. I know the part that flowers play in the plant's life cycle. 	<p><u>Plants</u></p> <ul style="list-style-type: none"> I can set up a simple practical enquiry to observe how seeds are formed. I can set up a fair test to investigate how water is transported through a plant. <p><u>Investigation:</u> How does water travel in a plant?</p>
<p>Summer 2 (A) Phase: Y3/4</p>	<p>nutrition diet vitamins minerals fats proteins carbohydrates vertebrates invertebrates</p>	<p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> I know that animals, including humans, need the right types of nutrition to survive. I know that animals, including humans, cannot make their own food. I know that animals and humans have skeletons and muscles for support, protection and movement. 	<p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> I can compare, contrast and classify the diets of different animals. I can investigate the nutritional content of food. I can record my findings in labelled diagrams. <p><u>Investigation:</u> Are all drinks healthy? (Comparing the amounts of sugar found in drinks, and representing findings visually.)</p>
<p>Autumn 1 (A) Phase: Y5/6</p>	<p>gravity friction air resistance particles upthrust weight Newtons (Newton metre)</p>	<p><u>Forces</u></p> <ul style="list-style-type: none"> I know that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. I know about the effects of air resistance, water resistance and friction that act between moving surfaces. I know that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. 	<p><u>Forces</u></p> <ul style="list-style-type: none"> I can make a prediction based on previously learned scientific knowledge. I can plan an investigation to explore air resistance. I can recognise and control variables where necessary. I can take measurements to collect data, using a range of scientific equipment with increasing accuracy and precision. I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and/or bar and line graphs. I can report and present findings from enquires, including conclusions, causal relationships and explanations of results (in oral and written forms). <p><u>Investigation:</u> How does surface area affect the speed at which an object falls?</p>

<p>Autumn 2 (A) Phase: Y5/6</p>	<p>thermal conductor insulator solvent solid liquid particles suspensions mixtures substance solution</p>	<p><u>Properties of materials</u></p> <ul style="list-style-type: none"> • I know that some materials will dissolve in liquid to form a solution. • I know how to recover a substance from a solution. • I know how different mixtures can be separated, through filtering, sieving and evaporating. • I know the particular uses of everyday materials, including metals, wood and plastic based on evidence from investigations. • I know that dissolving, mixing and changes of state are reversible changes. • I know that some changes result in the formation of new materials, including changes associated with burning. 	<p><u>Properties of Materials</u></p> <ul style="list-style-type: none"> • I can compare and classify materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. • I can control variables to conduct a fair test when investigating the components of mixtures. • I can take measurements to collect data, using a range of scientific equipment with increasing accuracy and precision. • I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and/or bar and line graphs. • I can report and present findings from enquires, including conclusions, causal relationships and explanations of results (in oral and written forms). <p><u>Investigation:</u> Do all solids dissolve?</p>
<p>Spring 1 (A) Phase: Y5/6</p>	<p>gestation foetus fertilisation species baby toddler adolescent adult elderly person puberty hormones pituitary gland testosterone oestrogen puberty</p>	<p><u>Animals including humans</u></p> <ul style="list-style-type: none"> • I know the 6 stages of human development. • I know the changes that occur during puberty. • I know that different species of animal have different gestation periods. 	<p><u>Animals including humans</u></p> <ul style="list-style-type: none"> • I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, to investigate growth. • I can report and present findings from research about the gestation periods of different animals, including conclusions, causal relationships and explanations, in oral and written forms such as displays and other presentations. • I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. <p><u>Investigation:</u> Are the gestation periods of all species of animal the same. Does age affect height?</p>
<p>Spring 2 (A) Phase: Y5/6</p>	<p>pollination fertilisation germination petal stamen (anther + filament) carpel (stigma + style + ovary + ovule)</p>	<p><u>Living Things</u></p> <ul style="list-style-type: none"> • I know the life process of reproduction in some plants. • I know the life process of reproduction in some animals. • I know the differences in the life cycles of mammals, amphibians, insects and birds. • I know the difference between sexual and asexual reproduction in plants. 	<p><u>Living Things</u></p> <ul style="list-style-type: none"> • I can observe and compare the life cycles of plants and animals in the local environment and other plants and animals around the world, such as in rainforests and oceans. • I can understand and draw scientific diagrams with labels. • I can plan an investigation to test how to grow new plants from a parent plant. <p><u>Investigation:</u> Can a plant be cloned?</p>
<p>Summer 1 (A) Phase: Y5/6</p>	<p>solvent solution solute soluble insoluble solid liquid particles suspensions</p>	<p><u>Properties of materials</u></p> <ul style="list-style-type: none"> • I know that some materials will dissolve in liquid to form a solution. • I know how to recover a substance from a solution. • I know how different mixtures can be separated, through filtering, sieving and evaporating. • I know the particular uses of everyday materials, including metals, wood and plastic based on evidence from investigations. • I know that dissolving, mixing and changes of state are reversible changes. • I know that some changes result in the formation of new materials, including changes associated with burning. 	<p><u>Properties of Materials</u></p> <ul style="list-style-type: none"> • I can compare and classify materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. • I can control variables to conduct a fair test when investigating the components of mixtures. • I can take measurements to collect data, using a range of scientific equipment with increasing accuracy and precision. • I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and/or bar and line graphs. • I can report and present findings from enquires, including conclusions, causal relationships and explanations of results (in oral and written forms). <p><u>Investigation:</u> Are changes of state reversible changes?</p>

<p>Summer 2 (A) Phase: Y5/6</p>	<p>Earth axis rotate star Sun Planets Mercury Venus Earth Mars Jupiter Saturn Uranus Neptune full moon gibbous moon half moon crescent moon new moon waxing waning orbit planets revolve sphere</p>	<p><u>The Earth and Space</u></p> <ul style="list-style-type: none"> • I know that the Sun is a star at the centre of our solar system. • I know that our solar system has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. (Pluto is a 'dwarf planet.) • I know that a moon is a celestial body that orbits a planet. • I know that the movement of the Earth, and other planets, is relative to the Sun in the solar system. • know that the movement of the Moon relative to the Earth. • I know that the Sun, Earth and Moon are approximately spherical bodies. • I know how the Earth's rotation explains day and night and the apparent movement of the Sun across the sky. • I know that it is not safe to look directly at the Sun. 	<p><u>The Earth and Space</u></p> <ul style="list-style-type: none"> • I can plan a scientific enquiry to investigate why some people think that structures such as Stonehenge might have been used as a clock. • I can record data and results of increasing complexity using scientific diagrams and labels, when tracking the phases of the moon. <p><u>Investigation:</u> Can shadows help us to tell the time?</p>
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SCIENCE – Cycle B			
Subject	Key vocab.	Declarative knowledge	Procedural knowledge
Autumn 1 (B) Phase: EYFS	materials metal stone wood paper properties strong weak hard bendy investigate describe	<u>Medieval Times</u> <ul style="list-style-type: none"> I know the names of different materials including metal, stone, wood and paper. [Understanding the World: The Natural World] I know that different materials have different properties, including strong, weak, hard and bendy. [Understanding the World: The Natural World] I know that wood comes from trees. [Understanding the World: The Natural World] 	<u>Medieval Times</u> <ul style="list-style-type: none"> I can investigate the strength of materials. [Understanding the World: The Natural World] I can describe the properties of materials. [Understanding the World: The Natural World] I can identify the materials around me. [Understanding the World: People, Culture and Communities] <u>Investigation:</u> Are all materials strong?
Autumn 2 (B) Phase: EYFS	water rock land liquid solid environment habitat roll flow	<u>Under The Sea</u> <ul style="list-style-type: none"> I know that water is a liquid. [Understanding the World: The Natural World] I know that rock is a solid. [Understanding the World: The Natural World] I know that some animals live underwater whilst some animals live on land. [Understanding the World: The Natural World] I know that different animals need different environments to stay alive. [Understanding the World: The Natural World] 	<u>Under The Sea</u> <ul style="list-style-type: none"> I can investigate the differences between solids and liquids. [Understanding the World: The Natural World] I can explain why I could not live under the water. [Understanding the World: The Natural World] I can compare the habitats of different animals. [Understanding the World: The Natural World] <u>Investigation:</u> How do liquids behave?
Spring 1 (B) Phase: EYFS	fabric properties warm cold temperature waterproof wet dry	<u>Materials That We Use</u> <ul style="list-style-type: none"> I know that there are different types of fabric. [Understanding the World: The Natural World] I know that people wear clothes to keep them warm. [Understanding the World: People, Culture and Communities] I know that some animals have fur to keep them warm. [Understanding the World: The Natural World] I know that some materials are waterproof. [Understanding the World: The Natural World] 	<u>Materials That We Use</u> <ul style="list-style-type: none"> I can describe the properties of different fabrics, such as smooth, furry or rough. [Understanding the World: The Natural World] I can explore which materials keep you warm. [Understanding the World: The Natural World] I can explore which materials keep you dry. [Understanding the World: The Natural World] <u>Investigation:</u> Which material will keep my teddy dry?
Spring 2 (B) Phase: EYFS	habitats shelter survive conditions warmth dry damp wet air waterproof investigate healthy unhealthy compare	<u>The Gift of Charity</u> <ul style="list-style-type: none"> I know that humans need shelter to survive. [Understanding the World: People, Culture and Communities] I know that humans need food and water to survive. [Understanding the World: People, Culture and Communities] I know that humans need warmth to survive. [Understanding the World: People, Culture and Communities] I know that humans need air to survive. [Understanding the World: People, Culture and Communities] 	<u>The Gift of Charity</u> <ul style="list-style-type: none"> I can investigate the properties of materials when making a shelter. [Understanding the World: The Natural World] I can sort foods into the groups: healthy and unhealthy. [Personal, Social and Emotional Development: Managing Self] I can compare safe and unsafe habitats. [Personal, Social and Emotional Development: Managing Self] <u>Investigation:</u> What should I use to make a shelter for a human?
Summer 1 (B) Phase: EYFS	properties surface rough smooth bumpy flat fast slow heavy light speed distance	<u>Julia Donaldson vs John Burningham</u> <ul style="list-style-type: none"> I know the properties of different materials, such as: rough, smooth, bumpy and flat. [Expressive Arts and Design: Creating with Materials] I know that some objects sink and some objects float. [Expressive Arts and Design: Creating with Materials] I know that some materials are heavy and some materials are light. [Expressive Arts and Design: Creating with Materials] 	<u>Julia Donaldson vs John Burningham</u> <ul style="list-style-type: none"> I can investigate how a toy car moves along different surfaces. [Expressive Arts and Design: Creating with Materials] I can investigate the speed at which different materials fall. [Expressive Arts and Design: Creating with Materials] <u>Investigation:</u> Will Mr Gumpy’s car always travel at the same speed?

<p>Summer 2 (B) Phase: EYFS</p>	<p>senses smell taste hear touch feel see sight heart lungs brain light dark shadows</p>	<p><u>Healthy Bodies, Healthy Minds</u></p> <ul style="list-style-type: none"> I know the names of different parts of my body. [Personal, Social and Emotional Development: Managing Self] I know that I have different senses, including taste, hearing, smell, touch and sight. [Understanding the World: The Natural World] I know the names of some internal body parts, such as the heart, lungs and brain. [Personal, Social and Emotional Development: Managing Self] 	<p><u>Healthy Bodies, Healthy Minds</u></p> <ul style="list-style-type: none"> I can name different parts of my body. [Personal, Social and Emotional Development: Managing Self] I can explore tastes. [Understanding the World: The Natural World] I can explore smells. [Understanding the World: The Natural World] I can investigate shadows. [Understanding the World: The Natural World] <p><u>Investigation:</u> Do we always have a shadow? Do all things taste the same?</p>
<p>Autumn 1 (B) Phase: Y1/2</p>	<p>wood plastic glass metal rock solid liquid gas</p>	<p><u>Properties of Everyday Materials</u></p> <ul style="list-style-type: none"> I know the names of the following materials: wood, plastic, glass, metal and rock. I know the following properties: hard, soft, bendy, rigid, smooth, rough, transparent, opaque and waterproof. I know why different materials are suitable for different uses. 	<p><u>Properties of Everyday Materials</u></p> <ul style="list-style-type: none"> I can distinguish the difference between an object and the material from which it is made. I can compare and group together a variety of everyday materials on the basis of their properties. I can investigate how the shapes of solid objects can be changed by squashing, bending, twisting and stretching. <p><u>Investigation:</u> Can the shape of a solid be changed?</p>
<p>Autumn 2 (B) Phase: Y1/2</p>	<p>growth nutrition respiration egg larva pupa adult birds fish amphibians reptiles mammals invertebrates carnivores herbivores omnivores</p>	<p><u>Animals Including Humans (Classifying Animals)</u></p> <ul style="list-style-type: none"> I know that animals, including humans, have offspring that grow into adults. I know that animals, including humans, need water, food and shelter to survive. I know the differences between birds, mammals, reptiles, fish and amphibians. I know the differences between carnivores, herbivores and omnivores. I know which part of the body is associated with each sense. 	<p><u>Animals Including Humans (Classifying Animals)</u></p> <ul style="list-style-type: none"> I can describe and compare the structure of a variety of common animals. I can group and classify animals based on what they eat. <p><u>Investigation:</u> How can animals be grouped?</p>
<p>Spring 1 (B) Phase: Y1/2</p>	<p>seasons spring summer autumn winter temperature degrees Celsius thermometer weather vane hot warm mild cold</p>	<p><u>Seasons – Autumn and Winter</u></p> <ul style="list-style-type: none"> I know that the length of the day varies throughout the year. I know the types of weather associated with the four seasons. I know that seasonal changes will affect my clothing choices. I know how some animals are affected by the low temperatures in winter. 	<p><u>Seasons – Autumn and Winter</u></p> <ul style="list-style-type: none"> I can plot changes in the weather on a chart. I can describe how the length of the day changes as the seasons change. <p><u>Investigation:</u> Can a pine cone predict the weather?</p>
<p>Spring 2 (B) Phase: Y1/2</p>	<p>squash bend stretch twist</p>	<p><u>Changing Shape: Everyday Materials</u></p> <ul style="list-style-type: none"> I know that some materials can have their shape changed easily. I know the properties of solids and liquids affect how they behave. 	<p><u>Changing Shape: Everyday Materials</u></p> <ul style="list-style-type: none"> I can investigate how the shape of a solid object can be changed by squashing, bending, twisting and stretching. I can record my findings in a table. I can investigate how different liquids flow. <p><u>Investigation:</u> Is sand a liquid or a solid?</p>

<p>Summer 1 (B) Phase: Y1/2</p>	<p>evergreen deciduous root branch trunk stalk leaf flower petal seeds bulbs twigs water light heat temperature</p>	<p><u>Plants</u></p> <ul style="list-style-type: none"> I know the basic structure of a flowering plant, including a stem, roots, leaves and petals. I know the following plants: daffodils, daisies, buttercups, roses, poppies, tulips and dandelions. I know that there are evergreen and deciduous trees. I know that plants need water, light and warmth to grow healthily. 	<p><u>Plants</u></p> <ul style="list-style-type: none"> I can observe and describe how seeds and bulbs grow into mature plants. I can draw diagrams showing parts of different plants, including trees. I can investigate the conditions needed for growth. <p><u>Investigation:</u> Do plants need soil to grow?</p>
<p>Summer 2 (B) Phase: Y1/2</p>	<p>movement respiration sensitivity nutrition excretion reproduction growth</p>	<p><u>Living Things</u></p> <ul style="list-style-type: none"> I know that there are seven life processes that all living things do: movement, respiration, sensitivity, nutrition, excretion, reproduction and growth. I know the differences between things that are living, dead and things that have never been alive. 	<p><u>Living Things</u></p> <ul style="list-style-type: none"> I can classify things that are living, dead or never alive. I can construct a simple food chain. I can investigate whether a plant can breathe. <p><u>Investigation:</u> Do plants breathe?</p>
<p>Autumn 1 (B) Phase: Y3/4</p>	<p>vibration volume pitch wave source decibel</p>	<p><u>Sound</u></p> <ul style="list-style-type: none"> I know that sound is made from vibrations. I know the differences between patterns of vibrations. I know that sounds get fainter as the distance from the sound source increases. 	<p><u>Sound</u></p> <ul style="list-style-type: none"> I can use a data logger to take measurements. I can record my findings in a table. I can record my findings in a graph. I can set up a fair test to investigate the patterns between the pitch of the sound and the features of the object that produced it. I can make observations to understand that vibrations from sounds travel through a medium to the ear. <p><u>Investigation:</u> Can I change the pitch of a sound?</p>
<p>Autumn 2 (B) Phase: Y3/4</p>	<p>solid liquid gas melting condensation evaporation solidifying freezing particles water vapour steam heating</p>	<p><u>States of Matter</u></p> <ul style="list-style-type: none"> I know the differences between solid, liquids and gases. I know that some materials can change state. I know the stages of the water cycle. 	<p><u>States of Matter</u></p> <ul style="list-style-type: none"> I can investigate the temperature at which some materials change state. I can measure temperatures using a thermometer and/or a data logger. I can record my findings in a table. I can record my findings in a graph. <p><u>Investigation:</u> Do all solids melt at the same temperature?</p>
<p>Spring 1 (B) Phase: Y3/4</p>	<p>appliance circuit battery bulb switch buzzer wire conductor insulator</p>	<p><u>Electricity</u></p> <ul style="list-style-type: none"> I know that some common appliances run on electricity. I know how to construct a simple series electrical circuit. I know some common electrical conductors and insulators. I know that a switch opens and closes a circuit. I know how to work safely when working with electricity. 	<p><u>Electricity</u></p> <ul style="list-style-type: none"> I can predict whether or not a lamp will light in a simple series circuit. I can investigate how to make a bulb brighter. I can conduct an investigation into which materials conduct electricity. <p><u>Investigation:</u> Are all materials conductors of electricity? Can I make a bulb brighter?</p>

<p>Spring 2 (B) Phase: Y3/4</p>	<p>incisor canine molar premolar saliva oesophagus stomach small intestine large intestine</p>	<p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> I know the names of human teeth. I know the functions of different human teeth. I know the parts of the digestive system and their functions 	<p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> I can use diagrams to report my findings. I can carry out a fair test to investigate what damages teeth, and how to look after them. <p><u>Investigation:</u> Are my teeth invincible?</p>
<p>Summer 1 (B) Phase: Y3/4</p>	<p>vertebrate invertebrate environment habitat</p>	<p><u>Living Things</u></p> <ul style="list-style-type: none"> I know what a vertebrate is. I know what an invertebrate is. I know that plants can be grouped into flowering plants and non-flowering points. I know the differences between different groups of vertebrate, including: fish, amphibians, reptiles, birds and mammals. I know the differences between different groups of invertebrates, such as snails and slugs, worms, spiders and insects. I know how changes in environment can cause a danger to living things. 	<p><u>Living Things</u></p> <ul style="list-style-type: none"> I can create and use classification keys to group vertebrates and invertebrates. I can explore examples of human impact on environments. I can record data in a table when investigating plants and animals in their habitats. I can record data in a graph when investigating plants and animals in their habitats. <p><u>Investigation:</u> Do plants prefer our playground or East Park?</p>
<p>Summer 2 (B) Phase: Y3/4</p>	<p>producer consumer predator prey herbivore carnivore omnivore</p>	<p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> I know how food chains work. I know the parts that different animals play in food chains. 	<p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> I can construct a food chain. I can compare and contrast the different teeth of different animals, suggesting reasons for their differences. <p><u>Investigation:</u> Can a skull teach me about an animal's diet?</p>
<p>Autumn 1 (B) Phase: Y5/6</p>	<p>volts resistance conductor insulator circuit battery bulb switch buzzer wire cell</p>	<p><u>Electricity</u></p> <ul style="list-style-type: none"> I know what the components of the circuit are. I know the electrical symbol for each component. I know that the brightness of a bulb is determined by the number and voltage of cells used in a circuit. I know that the volume of a buzzer is determined by the number and voltage of cells used in a circuit. 	<p><u>Electricity</u></p> <ul style="list-style-type: none"> I can make a prediction based on previously learned scientific knowledge. I can compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. I can plan a scientific enquiry to investigate the effect of changes in voltage or number of cells. I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. I can report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. <p><u>Investigation:</u> How does a change in voltage affect my circuit?</p>
<p>Autumn 2 (B) Phase: Y5/6</p>	<p>reflection refraction light source opaque translucent transparent</p>	<p><u>Light</u></p> <ul style="list-style-type: none"> I know that light appears to travel in straight lines. I know that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. I know that objects are seen because they give out or reflect light into the eye. I know that light travels in straight lines so shadows have the same shape as the objects that cast them. 	<p><u>Light</u></p> <ul style="list-style-type: none"> I can make a prediction based on previously learned scientific knowledge. I can plan a scientific enquiry to investigate the effect of a prism on a single beam of light. I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. I can report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. <p><u>Investigation:</u> Can I make a rainbow from a prism?</p>

<p>Spring 1 (B) Phase: Y5/6</p>	<p>circulatory system heart blood veins arteries pulse clotting vessels valve</p>	<p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> • I know the names of the main parts of the human circulatory system. • I know the functions of the heart, blood vessels and blood. • I know the impact of diet, exercise, drugs and lifestyle on the way the body functions. • I know the ways in which nutrients and water are transported within animals, including humans. 	<p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> • I can explain how the circulatory system works. • I can explore the work of scientists and scientific research about the relationship between diet, exercise, drugs, lifestyle and health. <p><u>Investigation:</u> Is there a relationship between my circulatory system and exercise?</p>
<p>Spring 2 (B) Phase: Y5/6</p>	<p>evolution micro-organism inheritance adapted disadvantages kingdoms evolved palaentologist</p>	<p><u>Evolution and Inheritance</u></p> <ul style="list-style-type: none"> • I know that fossils provide information about living things that inhabited the Earth millions of years ago. • I know that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. • I know that animals and plants are adapted to suit their environment in different ways. 	<p><u>Evolution and Inheritance</u></p> <ul style="list-style-type: none"> • I can explore how palaeontologists such as Mary Anning, Charles Darwin and Alfred Wallace developed their ideas of evolution. • I can analyse the advantages and disadvantages of specific adaptations to animals and plants. <p><u>Investigation:</u> How can rocks teach me about animals and plants?</p>
<p>Summer 1 (B) Phase: Y5/6</p>	<p>classification micro-organism vertebrate invertebrate</p>	<p><u>Living Things</u></p> <ul style="list-style-type: none"> • I know how living things are classified into broad groups, including micro-organisms, plants and animals. • I know the reasons for classifying plants and animals based on specific characteristics. 	<p><u>Living Things</u></p> <ul style="list-style-type: none"> • I can make a key to classify plants. • I can create a classification system. <p><u>Investigation:</u> Are all plants the same?</p>
<p>Summer 2 (B) Phase: Y5/6</p>	<p>lifestyle substance balanced diet</p>	<p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> • I know the impact of diet, exercise, drugs and lifestyle on the way bodies function. • I know how the circulatory system enables the body to function. 	<p><u>Animals including Humans</u></p> <ul style="list-style-type: none"> • I can explore the work of scientists and scientific research to understand the relationship between diet, exercise, drugs, lifestyle and health. <p><u>Investigation:</u> Question to be chosen by the children.</p>